

STATUS OF CLAIMS AFTER ELECTION

1. Canceled
2. Canceled
3. Canceled
4. Canceled
5. Canceled
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36. (Original) A composite body exhibiting a photocatalytic effect consisting essentially of

a core particle consisting essentially of a material without deleterious effect on a photocatalytic reaction; and

a multiplicity of nanoparticles, each less than 33% the diameter of the core particles, of photocatalytic material upon the surface of the core particle, the photocatalytic material being less than 20% by weight of (I) the combined multiplicity of photocatalytic material nanoparticles and (ii) the core particle.

37. (Original) The composite body according to claim 36

wherein the core particle is less than 1 centimeter in diameter; and wherein each of the multiplicity of nanoparticles is of diameter less than 100 nanometers.

38. (Original) The composite body according to claim 36 wherein the core particle's material without deleterious effect on a photocatalytic reaction consists essentially of

a material drawn from the group consisting essentially of silicates and carbonates including silicate and carbonate powders, mineral and mineral composites including calcined clay and wollastonite, metal oxides including zinc oxide, inorganic pigments, and construction aggregates including roofing granules.

39. (Original) The composite body according to claim 36 wherein the core particle consists essentially of

a polymer.

40. (Original) The composite body according to claim 39 wherein the core particle's polymer consists essentially of

polymer drawn from the group consisting essentially of acrylics, acrylonitriles, acrylamides, butenes, epoxies, fluoropolymers, melamines, methacrylates, nylons, phenolics, polyamids, polyamines, polyesters, polyethylenes, polypropylenes, polysulfides, polyurethanes, silicones, styrenes, terephthalates, vinyls.

41. (Original) The composite body according to claim 39

wherein the polymer core particle is less than 1 centimeter in diameter.

42. (Original) The composite body according to claim 36 wherein the photocatalytic material of the multiplicity of nanoparticles is drawn from the group of metal compound semiconductors consisting essentially of

titanium, zinc, tungsten and iron, and oxides of titanium, zinc, tungsten and iron, and strontium titanates.

43. (Original) The composite body according to claim 42 wherein the metal compound semiconductor photocatalytic material is combined with a metal or metal compound drawn from the group consisting of vanadium, iron, cobalt, nickel, copper, zinc, ruthenium, rhodium, silicon, tin, palladium, gold, platinum, and silver.
44. (Original) The composite body according to claim 36 wherein the photocatalytic material is drawn from the group of metal compound semiconductors consisting essentially of anatase titanium dioxide and zinc oxide.
45. (Original) The composite body according to claim 36 wherein the photocatalytic material consists of particles of a diameter from 1 nanometer to 100 nanometers.
46. (Original) The composite body according to claim 36 wherein the photocatalytic material consists of particles of diameter from 1 nanometer to 50 nanometers.
47. (Original) The composite body according to claim 36 wherein the photocatalytic material consists of particles of diameter from 1 nanometer to 10 nanometers.
48. (Original) The composite body according to claim 36 wherein the core particles consist of particles of diameter from 100 nanometers to 1 centimeter.
49. (Original) The composite body according to claim 36 wherein weight of the photocatalytic material of the combined multiplicity of nanoparticles is less than 10% of weight of the core particle.
50. (Original) A great multiplicity of composite bodies in accordance with claim 36 incorporated in amount from 0.001% to 85% by volume within a composition suitable for use as an additive or a coating.

51. (Original) The great multiplicity of composite bodies in accordance with claim 50 incorporated in a composition that further includes one or more materials from the group of building materials consisting of concrete, cement, ceramic, stucco, hard flooring, masonry, roofing shingles, wall shingles, building siding and swimming pool surfaces.

52. (Original) The great multiplicity of composite bodies in accordance with claim 50 incorporated in a composition that is effective as an anti-fouling coating.

53. (Original) The composite body according to claim 36 effective in killing by contact any of algae, bacteria, mold or fungus.

54. (Original) The composite body according to claim 36 wherein, at a proportion by weight of the photocatalytic material in the composite particle of less than 10%, the efficacy of the photocatalytic material within the composite particle to kill by contact algae, bacteria, mold, and fungus upon the composite particle's surface is at least one-half (.5) as good as is the efficacy of this same photocatalytic material to kill in purest form, making that at least equal killing effect is realized with a five to one (5:1) reduction in the amount of photocatalytic material when this photocatalytic material is upon the surface of the composite particle.